ORDINANCE NO. 94- 4

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF PALM BEACH COUNTY, FLORIDA, AMENDING THE STANDARD BUILDING CODE, 1991 EDITION, ORDINANCE 92-16; AND PALM BEACH COUNTY AMENDMENTS TO THE STANDARD BUILDING CODE, 1991 EDITION, ORDINANCE 92-17; PROVIDING FOR THE ADMINISTRATION OF THE TECHNICAL CODES; PROVIDING FOR REPEAL OF LAWS IN CONFLICT; PROVIDING FOR CAPTIONS; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Chapter 125 of the Florida Statues empower counties to provide for the health, safety and general welfare including the enactment of construction and related technical standards and regulations; and

WHEREAS, pursuant to Chapter 90-445, Laws of Florida, as amended, Palm Beach County has adopted by Ordinance the Standard Building, Gas, Mechanical and Plumbing Codes, 1991 Edition; and

WHEREAS, Chapter 90-445, Laws of Florida, as amended, authorizes Palm Beach County to adopt by ordinance amendments to modify and improve its construction codes to meet local conditions, provided that said amendments do not lower the standards of the state minimum code adopted; and

WHEREAS, pursuant to Chapter 90-445 and F.S. 553.73(4)(a), the Building Code Advisory Board of Palm Beach County has reviewed local conditions and based on this review has recommended the adoption of these amendments; and

WHEREAS, the adoption of these amendments will be in the public interest by strengthening the Standard Codes, 1991 Edition, for the health, safety and general welfare of citizens in the unincorporated area of Palm Beach County; and

WHEREAS, the Board of County Commissioners of Palm Beach County, sitting as the Land Development Regulation Commission has determined that the proposed amendments to the Standard Codes are consistent with the adopted Comprehensive Plan of Palm Beach County, as required by Section 163.3194(2), Florida Statutes.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF PALM BEACH COUNTY, FLORIDA, that:

SECTION 1 - AUTHORITY

This Ordinance is promulgated pursuant to Chapter 90-445, Laws of Florida, as amended.

SECTION 2 - AMENDMENTS ADOPTED

The Palm Beach County Building Code Enforcement Administrative Code and amendments to the Standard Building Code, 1991 Edition, hereto attached as Attachment A, are hereby adopted and incorporated herein, as part of the minimum construction standards for the unincorporated areas of Palm Beach County and for those municipalities within Palm Beach County for which the Palm Beach County Planning, Zoning & Building Department provides construction plan review and inspection services, pursuant to interlocal agreements.

SECTION 3 - REPEAL OF LAWS IN CONFLICT

All local laws and ordinances of Palm Beach County, Florida, or parts thereof, which pertain to the unincorporated area of Palm Beach County, Florida, which conflict with this or any part of this ordinance are hereby repealed pursuant to Article 8, Section 6d, Florida Constitution.

SECTION 4 - CAPTIONS

The captions, section headings, and section designations used in this Code are intended for convenience of user only and shall have no effect on the interpretation of the provisions of this Ordinance.

SECTION 5 - INCLUSION IN CODE

The provisions of this ordinance shall become and be made a part of the Code of Laws and Ordinances of Palm Beach County, Florida. The sections of this ordinance may be retitled, renumbered, or relettered to accomplish such and the word "ordinance" may be changed to "section", "article" or any other appropriate words.

SECTION 6 - SEVERABILITY

If any section, paragraph, sentence, clause, phrase or word of this Ordinance is for any reason held to be unconstitutional, inoperative, or void, such holding shall not affect the validity of the remainder of this Ordinance.

ATTACHMENT A

PALM BEACH COUNTY
BUILDING CODES ENFORCEMENT
ADMINISTRATIVE CODE AND
AMENDMENTS TO THE STANDARD BUILDING CODE, 1993 EDITION

SECTION 103

PERMITS

103.6 Conditions Of The Permit

103.6.1 Permit Intent - A permit issued shall be construed to be a license to proceed with the work and not as authority to violate, cancel, alter, or set aside any of the provisions of or the technical Codes, nor shall issuance of a permit prevent the Building Official from thereafter requiring a correction of errors in plans, construction, or violations of this Code.

103.6.3 Plans - When the Building Official issues a permit, he shall endorse, in writing or by stamp, both sets of plans "Reviewed for Code Compliance". One set of drawings so reviewed shall be retained by the Building Official and the other set shall be returned to the applicant. The permitted drawings shall be kept at the site of work and shall be open to inspection by the Building Official or his authorized representative.

103.7 Fees - For all work requiring a permit as set forth in this Code, and for services associated therewith, a fee shall be paid as required at the time of the filing application or requesting service. The fee shall be in accordance with the Palm Beach County Construction Permit Fee Schedule, as amended.

103.7.1 Collection of Special Fees - ~~Fees, in accordance with the Palm Beach County Construction Permit Fee Schedule, that are assessed after a permit is issued, shall be paid prior to the issuance of a Certificate of Occupancy/Certification of Completion or release of electrical power. Fees for the collection and disposal of solid waste, as adopted by the Solid Waste Authority, shall be paid prior to the issuance of a Certificate of Occupancy or release of electrical power.~~ To facilitate the efficient operation of the permit application review and inspection process, Planning, Zoning and Building Department shall be authorized to collect fees for other governmental agencies. Such fees shall be legally authorized by law and implemented through a countywide PPM. The PPM shall specify the time and manner of collection so as to maximize efficiency and provide convenience to the customer.

103.8.10 Special Building Inspector - ~~On new buildings or additions of Type I or Type II construction, on all major structural alterations, on concrete work where the design is based on f'c in excess of 3,000 pounds per square inch, and on buildings of area greater than 20,000 square foot on buildings more than 2 stories in height, and on buildings and structures of unusual design or methods of construction,~~ The Building Official may require the owner to employ a special inspector for the inspection of the structural framework on the following type buildings:

- New buildings or additions to buildings of Type I or II Construction, or
- Buildings greater than 20,000 square feet, or
- 2 stories or more in height, or
- Unusual structural design

~~and such~~ The special inspector shall be present at all times that work is in progress on the structural frame. The Building Official may require a special inspector on pile driving. (Florida State Statute 553 requires a special inspector under certain circumstances).

Such special inspector shall be a registered architect or engineer, an employee of either, or any other competent person or agency whose qualifications are approved by the Building Official who shall be responsible for the control of the materials and methods of

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SECTION 7 - EFFECTIVE DATE

The provisions of this Ordinance shall become effective June 1, 1994, after receipt of acknowledgement by the Secretary of State.

APPROVED AND ADOPTED by the Board of County Commissioners of Palm Beach County, Florida, on this 15th day of March, 1994.

PALM BEACH COUNTY, FLORIDA, BY ITS
BOARD OF COUNTY COMMISSIONERS:

By: Mary McCarty
Chair

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY:

By: Cooper 3/1/94
Attorney

DOROTHY H. WILKEN, CLERK
BOARD OF COUNTY COMMISSIONERS

By:
Clerk

Acknowledged by the Department of State of the State of Florida, on this, the 25th day of March, 1994.

Acknowledgment received form the Department of State of the State of Florida, this 30th day of March, 1994, at 1:21p.m., and filed in the Office of the Clerk of the Board of County Commissioners of Palm Beach County, Florida.

STATE OF FLORIDA, COUNTY OF PALM BEACH
I, DOROTHY H. WILKEN, ex-officio Clerk of the Board of County Commissioners certify this to be a true and correct copy of the original filed in my office on 3/15/94.
DATED at West Palm Beach, FL on 3/31/94.
DOROTHY H. WILKEN, Clerk
By: D.C.

excess moment.

1205.7 Impacts from Wind-borne Debris - Glazed openings shall be designed for impact from wind-borne debris as defined in 1205.7.1 and 1205.7.2 Impact protective systems for such openings shall be permitted to be designed for impact in lieu of glazing if they comply with 1205.7.1 and 1205.7.2.

> **EXCEPTION:** When the aggregate area of openings in a wall or wall and roof are less than 5% of the wall area or wall and roof area, the glazed openings in the wall or wall and roof need not be designed for impact from wind-borne debris.

1205.7.1 Lower Floors - Glazed openings in the lowest 30 ft of exterior building walls and roofs shall comply with the large missile impact test in the SBCCI Standard for Wind-borne Debris Impact Tests.

1205.7.2 Upper Floors - Glazed openings located above the lowest 30 ft of exterior building walls and roofs shall comply with the small missile impact test in the SBCCI Standard for Wind-borne Debris Impact Tests.

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1205.2.5.5.1. Roof coverings that are air-permeable and installed over a roof deck shall be designed in accordance with 1205.2.5.5.3.

1205.2.5.5.3 Rigid Tile - Wind loads on rigid tile roof covering shall be determined as the lifting moment M_a. The lifting moment shall be determined in accordance with the following formula:

$$M_a = q_h C_L b L L_a [1.0 - GC_p]$$

where:

M_a = aerodynamic uplift moment (ft-lb) acting to raise the tail of the tile

q_h = wind velocity pressure (psf) determined from Table 1205.2A.

C_L = lift coefficient determined from Table 1205.2.3.3.

b = exposed width (ft) of the roof tile.

L = length (ft) of the roof tile.

L_a = moment arm (ft) from the axis of rotation to the point of uplift on the roof tile. The point of uplift shall be taken at 0.76L from the head of the tile and the middle of the exposed width. For roof tiles with nails or screws (with or without a tail clip), the axis of rotation shall be taken as the head of the tile for direct deck applications and as the top edge of the batten for battened applications. For roof tiles fastened only by a nail or screw along the side of the tile, the axis of rotation shall be determined by testing. For roof tiles installed with battens and fastened only by a clip near the tail of the tile, the moment arm shall be determined about the top edge of the batten with consideration given for the point of rotation of the tiles based on straight bond or broken bond and the tile profile.

GC_p = roof coefficient for each applicable zone determined from Figure 1205.2E. Roof coefficient shall not be adjusted for internal pressure.

Loose laid or mechanically fastened concrete and clay roof tiles complying with the following limitations shall be designed to withstand the wind loads prescribed in this section.

1. The roof tiles shall be either loose laid on battens or mechanically fastened.
2. The roof tiles shall be installed on solid sheathing which has been designed as components and cladding in accordance with 1205.2.3.3.
3. An underlayment shall be installed in accordance with 3207.
4. The tile shall be single lapped interlocking with a minimum head lap of not less than 2 inches.
5. The length of the tile shall be between 1.0 and 1.75 ft.
6. The exposed width of the tile shall be between 0.73 and 1.25 ft.
7. Maximum thickness of the tail of the roof tile shall not exceed 1.3 inches.

1205.2.5.5.3
LIFT COEFFICIENTS FOR LOOSE LAID OR MECHANICALLY FASTENED ROOF TILE

Roofing Material	CL
Concrete & clay tile	0.20

1205.2.5.6 Stability - Anchorage shall be provided to resist excess overturning, uplift and sliding forces. The overturning moment due to wind load shall not exceed two-thirds of the dead load stabilizing moment unless the building or structure is anchored so as to resist the

NOTE: See local Coastal Construction for special requirements in the Coastal Construction Control Zone, F.S. Chapter 161.

Effectiveness & Standards: The application of impact loads for glazed openings shall become effective upon the Boards adoption of SSTD 12-94, published by the Southern Building Code Congress International, Inc. The purpose of the standard is to determine the performance of a product or system, relative to the risk defined by the Code.

1205.2.4 Main Wind Force Resisting Systems (MWFRS) - Pressure coefficients GCp for all wind loading actions arising from combining loads acting simultaneously on more than one surface shall be determined by 1205.2.4.

1205.2.4.1 End Zones - The width of "X" end zones as shown in Figures 1205.2B1 and 1205.2B2 shall be twice the value of Z as determined in 1205.2.5.1 or 20 feet, whichever is greater. For one and two family dwellings, openings shall be permitted in end zones of widths up to 20 feet, provided property consideration is given to the required design wind loads. For framed buildings whose end bay spacings are greater than or equal to twice the value of Z as determined in 1205.2.5.1, the entire extra load for the end zone may be allocated entirely to the end frame.

1205.2.4.2 Applicability of Coefficients - Pressure coefficient GCp for the main wind force resisting system shall be taken from Table 1205.2B or 1205.2C and applied as shown in Figures 1205.2B1 and 1205.2B2 and as specified in 1205.2.2. Where more than one load case exists, buildings shall be designed for all load cases.

1205.2.4.3 Overhand Coefficients - The pressure coefficients GCp to be used for the effects of roof overhangs on MWFRS for each of the load cases and windward and leeward surfaces shall be as indicated in Table 105.2D. Roof overhang members shall be designed in accordance with 1205.2.5.

1205.2.5 Components and Cladding - Pressure coefficients GCp for wind loading actions on components and cladding shall be determined from Figures 1205.2C, 1205.2D and 205.2E, based on effective wind area.

1205.2.5.1 Edge Strips - The width of the edge strips Z for walls and roofs shall be determined by the smaller of 10% of the least horizontal dimension of the building or 40% of the eave height, but not less than the larger of 4% of the least horizontal dimension of the building or 3 ft (914 mm).

1205.2.5.2 Walls

1. Pressure coefficients GCp for components and cladding of walls shall be taken from Figure 1205.2C according to their effective wind areas and applied to the corresponding regions of the building as shown in Figure 1205.2C.
2. Coefficients taken from Figure 1205.2C may be reduced 10% if the angle of the roof is no greater than 10°.

1205.2.5.3 Gable and Hip Roofs - Pressure coefficients GCp for components and cladding of roofs shall be taken from Figure 1205.2D and 1205.2E. Pressure coefficients for roof angles greater than 45° shall be based on nationally recognized data.

1205.2.5.4 Monoslope Roofs - Pressure coefficients GC_p for monoslope roofs shall be taken from Figure 1205.2D for roof slopes between 0° and 3°, and from Figures 1205.2F and 1205.2G for roof slopes greater than 3°.

1205.2.5.5 Roof Covering Systems - [BCAB 93, see SBC 1205.3]

1205.2.5.5.1 Roof Deck - The roof deck shall be designed to withstand the wind pressures determined under 1205.2 for buildings 60 ft or less in height or ASCE 7 for buildings of any height.

1205.2.5.5.2 Roof Coverings - A roof covering used as a roof deck shall comply with

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construction. He shall be responsible for compliance with this Code and shall submit weekly progress of daily inspections to the Building Official.

At the completion of the construction work or project, the special inspector shall submit a certificate of compliance to the Building Official, stating that the work was done in compliance with this Code and in accordance with the permitted drawings; and his duties shall end with the submission of such certificate. Final inspection shall be made by the Building Official before a Certificate of Occupancy is issued.

In lieu of the above, the Building Official may accept a written certification by the designing architect or engineer that he has full supervision of the construction; and in addition the Building Official may require that the supervising architect or engineer provide testing laboratory reports as to welding, concrete strength, etc., from a recognized and approved testing laboratory or similar facility. Upon completion the Building Official may require that the designing architect or engineer submit a certificate of compliance, stating that all work was done in accordance with this Code and the permitted drawings.

CHAPTER 12
MINIMUM DESIGN LOADS

1205 - WIND LOADS

1205.1 Application - All buildings, structures and parts thereof shall be designed to withstand the appropriate wind loads prescribed herein. Decreases in wind loads shall not be made for the effect of shielding by other structure. Wind pressures ~~on buildings in 1205.2 and 1205.3~~ shall be assumed to act normal to the surfaces considered. ~~Wind forces on other structure in 1205.4 shall be applied as noted in Tables 1205.4A through 1205.4F.~~ For buildings located in areas where the basic wind speed is 90 mph or greater as defined in Figure 1205, glazed openings shall be designed for impacts from wind-borne debris described in Section 1205.7.

1205.1.1 Determination of Wind Forces - Wind forces on every building or structure shall be determined by the provisions of ASCE 7-88.

EXCEPTIONS:

1. Provisions of 1205.2, or 1205.3
2. Wind tunnel tests together with applicable sections of 1205.2 or 1205.3.
3. Compliance with prescriptive standards listed in Section 1205.1.5.

1205.1.2 Limitations

1205.1.2.1 Mixing of provisions from ASCE 7 and 1205.2 or 1205.3 shall not be permitted.

1205.1.2.2 Provisions of 1205.2 and 1205.3 and do not apply to buildings or structures having unusual geometric shapes, response characteristics or site locations for which channeling effects or buffeting in the wake of upwind obstructions may warrant special consideration. For these cases, wind loads shall be based on ~~1205.5~~ wind tunnel tests or nationally recognized data.

1205.1.5 Compliance with ~~either~~ of the following prescriptive standards shall be considered as prima facie evidence of compliance with Section 1205 for Group R3 buildings. The construction of building types shall be limited by the scope of the individual prescriptive standard. Mixing of techniques or provisions between different standards is not permitted. Specific features of a building, however, which fall outside the scope of a prescriptive standard may be given individual engineering attention, in accordance with Section 1205.1.1 numbers 1 and 2, subject to approval of the Building Official.

~~1.~~• SBCCI - ~~Deemed To Comply Standard,~~ SSTD 10-9~~0~~3.

~~2. Building Code Advisory Board, Minimum Structural Requirements For One and Two Family Dwellings, 7/12/89.~~

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CHAPTER 17
WOOD CONSTRUCTION

TABLE 1705.1

CONNECTION	FASTENER	NUMBER OR SPACING
Plywood and Particleboard ~~Roof &~~ Wall Sheathing		
1/2" or less	6d Common	6" o.c. edges and 12" o.c. intermediate
19/32" or greater	8d Common	6" o.c. edges and 12" o.c. intermediate
5/16" - 1/2"	16 ga galvanized wire staples, 3/8" min. crown. Length of 1" plus plywood or particleboard thickness	4" o.c. edges and 8" o.c. intermediate
19/32" - 3/4"		2" o.c. edges and 5" o.c. intermediate
1/2" fiberboard sheathing[7]	1 1/2" galvanized roofing nail 6 d common wall	3" o.c. at edges 6" at other bearings
Roof Sheathing		
Mean Roof Height < 25' 19/32" or greater	8d Common	Zone 1 & 2 6" o.c. edges and 6" o.c. intermediate Zone 3 4" o.c. edges and 6" o.c. intermediate
Mean Roof Height > 25' ≤ 35' 19/32" or greater	8d Common Zone 1 & 2 8d Ring-Shank Zone 3	Zone 1 & 2 6" o.c. edges and 6" o.c. intermediate Zone 3 4" o.c. edges and 6" o.c. intermediate
Mean Roof Height > 25' 19/32" - 3/4"	16ga galvanized wire staples 3/8" minimum crown. Length of 1", plus panel thickness.	Zone 1, 2 & 3 2" o.c. edges and 5" o.c. intermediate
Mean Roof Height > 25 ≤ 35'	16ga galvanized wire staples 3/8" minimum crown. Length of 1", plus panel thickness.	Zone 1 & 2 2" o.c. edges and 5" o.c. intermediate Zone 3 Not permitted

(Remainder of table unchanged)

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7. See Figure 1705.1 For Fastening Zones

FIGURE 1705.1

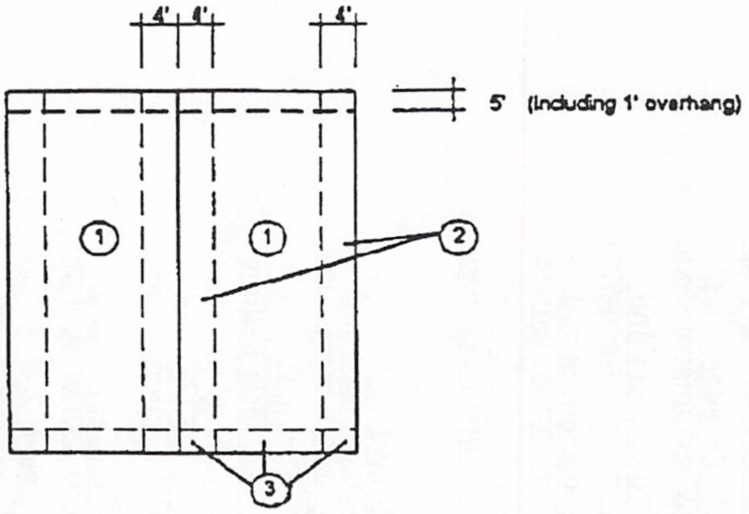

TABLE 1706.6A

TABLE 1706.6A Allowable Spans For Plywood Floor And Roof Sheathing Continuous Over Two Or More Spans And Face Grain Perpendicular To Supports.

Panel Span Rating	Panel Thickness (in)	Roof Maximum Span (in) Edges Blocked or other Support	Roof Maximum Span (in) Edges Unblocked	Load (psf) Total Load	Load (psf) Live Load	Floor Maximum Span (in)
~~24/0~~	~~15/32,1/2~~	~~24[7]~~	~~24~~	~~60~~	~~45~~	~~0~~
32/16	15/32,5/8	32	28	55	35	16[5]
40/20	19/32,7/8	40	32	40[3]	35[3]	20[5, 6]
48/24	23/32,7/8	48	36	40[3]	35[3]	24

1. These values apply for Structural I and II, C-D Sheathing and C-C grades only. Spans shall be limited to values shown because of possible effect of concentrated loads. Edges may be blocked with lumber or other approved type of edge support.

2. Span Rating appears on all panels in construction grades listed in footnote 1.

3. For roof live load of 40 psf or total load of 55 psf, decrease spans by 13% or use panel with next greater Span Rating.

4. Plywood edges shall have approved tongue and groove joints or shall be supported with blocking, unless 1/4 inch minimum thickness underlayment or 1 1/2 inches approved cellular or lightweight concrete is installed, or finished floor is 25/32 inches wood strip. Allowable uniform load based on deflection of 1/360 of span is 165 psf.

5. May be 24 inches if 25/32 inches wood strip flooring is installed at right angles to joists.

6. For joists spaced 24 inches o.c. plywood sheathing with Span Ratings numbers 40/20 or greater can be used for subfloors when supporting 1 1/2 inches lightweight concrete.

7. In no case shall any roof sheathing be less than 32/16 - 15/32 inches plywood in spans 16 inches or more on center. Blocking or clips are required for less than 19/32 inches thick plywood sheathing.

CHAPTER 25
STRUCTURAL TESTS

2505.5 Concrete and Clay Roof Tiles

2505.5.1 Overturning Resistance - Concrete and clay roof tiles shall be tested to determine their resistance to overturning in accordance with the SBCCI Standard for Determining the Wind Resistance of Concrete or Clay Roof Tiles.

2505.5.2 Wind Tunnel Testing - When roof tiles do not satisfy the limitations in Chapter 12 for rigid tile, a wind tunnel test may be used to determine the wind characteristic of the concrete or clay tile roof covering in accordance with the SBCCI Standard for Determining the Wind Resistance of Concrete or Clay Roof Tiles.

2601.3.3 Impacts from Wind-borne Debris - Exposed exterior glazing shall be designed for impacts from wind-borne debris in accordance with 1205.1 and 1205.

2703.3.4 Impacts from Wind-borne Debris - Exposed exterior glazing shall be designed for impacts from wind-borne debris in accordance with 1205.1 and 1205.5.

CHAPTER 32
INSTALLATION OF ROOF COVERINGS

3202.1.4 In order to demonstrate compliance with Chapter 12, roofing systems shall be tested for wind uplift pressure criteria in accordance with FM 4470, UL 580 or other criteria acceptable to the Building Official.

3202.1.5 In order to offset the effects of Palm Beach County being located in a high wind region, all roofing systems shall be installed in accordance with the manufacturers recommendation for high wind regions. In the absence of a manufacturers recommendation for asphalt or fiberglass shingles, such shingles shall be installed with not less than 6 fasteners.

3201.6 Wind Loads and Wind Resistance [BCAB 93]

3201.6.1 Wind loads on roof decks and other structural members supporting roof coverings are specified in 1205.

3201.6.2 Roof systems with built-up, modified bitumen, fully adhered or mechanically attached single-ply, metal panels, or other types of membrane roof coverings shall be designed to withstand the appropriate wind loads prescribed in 1205.

3201.6.3 Ballasted single-ply roof system coverings shall be designed in accordance with ANSI/ARMA/SPRI RP-4 (1988) "Wind Design Guide for Ballasted Single-Ply Roofing Systems."

3201.6.4 Asphalt shingles shall have self-seal strips or shall be interlocking, and shall have the type and minimum number of fasteners recommended by the manufacturer.

3201.6.4.1 Self-seal asphalt strip shingles shall have a minimum of six fasteners per shingle, when the roof is in one of the following categories:

1. The basic wind speed is 100 mph and the eave is 20 ft or higher above grade.
2. The basic wind speed is 100 mph and the Use Factor in Table 1205 is 1.15.
3. The basic wind speed is 110 mph.

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